

CRYOGEN PRESSURE VESSEL ASSEMBLY FOR SUPERCONDUCTING MAGNETS

Abstract

A cryogen pressure vessel assembly for a superconducting magnet comprises an inner former, an outer former, and an outer shell. The inner former has a plurality of superconducting magnet coils wound thereon, and the outer former has a plurality of bucking coils wound thereon. The inner former, the outer former, and the outer shell form a fluid boundary for a cryogen. In one aspect, a pressure face is formed on at least one of the coil formers, and a radial slot for receiving wires entering and exiting a coil is disposed in the pressure face. A plurality of wire clamps are positioned in the radial slot, with each wire clamp in the plurality of wire clamps including: a front face extending coplanar with the pressure face, a rear face opposite the front face, the rear face contacting a back surface of the radial slot, and a recess formed in the rear face, the recess forming a channel for passage of the wires.